National Aeronautics and Space Administration

LAGNIAPPE

Volume 26, Issue 2

February 26, 2003

"The same creator who names the stars also knows
the names of the seven souls we mourn today.
The crew of the Shuttle Columbia did not return
safely to Earth, yet we can pray
that they all are safely home.
The cause in which they died will continue.
Our journey into space will go on . . ."

President George W. Bush
February 1, 2003

STS107-E-05070 (18 January 2003) --- The bright sun dissects the airglow above Earth's horizon in this digital still camera's view photographed from the Space Shuttle Columbia.

From the desk of

BILL PARSONS

Stennis Space Center Director

Several weeks ago when I started thinking about what I would write in this month's Lagniappe, I never imagined I'd be addressing the events of Feb. 1. The loss of the Space Shuttle Columbia with all of its crew was a tragedy for the agency and the nation.

Throughout my Human Space Flight career, I have always taken seriously the role I play in keeping the astronauts safe, as I am sure all of you have.

Working at Kennedy Space Center after the Challenger accident, the NASA family taught me how important it is to process the shuttle according to the specifications and requirements, and I learned just how complicated the Space Shuttle is. I worked for a time as the NASA vehicle manager on the Space Shuttle Columbia and became very familiar with the oldest shuttle in our fleet.

I trained to be a convoy commander, the person who is on the shuttle landing facility, guiding the safing of the orbiter and assisting in the exiting of the crew. I have been to many landings at Edwards Air Force Base and Kennedy Space Center. Along with many of you, I had started to consider them routine.

Later, as the deputy center director of Johnson Space Center, I knew the extraordinary men and women who train our astronauts, perform the mission operations role on console during flight, provide engineering, software, hardware and all the many products and services Johnson provides. Once again, I was reminded of just how complicated the shuttle is. I also began to truly appreciate the workforce that makes it look so easy.

Along with other Stennis people, I went to Johnson on Feb. 4 for the memorial service. It was an extremely difficult day of sadness and grief. It was also a moment when I remembered the fantastic heroes who fly on the Space Shuttle, the International Space Station and ride on Russian Soyuz rockets. These men and women deserve our best and deserve to feel safe. I was sad but also inspired by their courage and the NASA family's commitment to this complicated human effort of space flight.

We must find out what happened, perform the tasks necessary to prevent this from ever happening again and we must prevail. We must do this to preserve the memory of our fallen brothers and sisters, for the nation and for mankind.

Art Stephenson, right, director, Marshall Space Flight Center (MSFC), Hunstville, Ala., discusses the testing process for the Space Shuttle Main Engine at Stennis Space Center with retired Air Force Maj. Gen. Michael Kostelnik, center, deputy associate administrator for the International Space Station and Space Shuttle programs, and Sam Ortega, Marshall Space Flight Center liaison, NASA Headquarters, during a tour of Bldg. 3202 in January.

NEWSCLIPS

New cargo ship docks with International Space Station: The tenth Russian Progress resupply vehicle to the International Space Station (ISS) docked Feb. 4, after launching from the Baikonur Cosmodrome in Kazakhstan on Feb. 2. Progress 10 carried food, fuel, clothing and other materials that should sustain Commander Ken Bowersox, Flight Engineer Nikolai Budarin, and NASA ISS Science Officer Don Pettit through the end of June. Progress also delivered repaired components for the Destiny laboratory Micro-gravity Science Glovebox, which experienced a power failure last November.

NASA's SORCE satellite soars into space to catch some rays: NASA's Solar Radiation and Climate Experiment (SORCE) successfully launched Jan. 25 aboard a Pegasus XL rocket. SORCE will study the sun's influence on the earth. It will measure how the sun affects the ozone layer, atmospheric circulation, clouds and oceans. This mission is a joint partnership between NASA and the University of Colorado's Laboratory for Atmospheric and Space Physics in Boulder, Colo. The mission is a principal investigator-led mission, in which NASA provides management, scientific oversight and engineering support. Scientists and engineers at the University of Colorado designed, built, calibrated and tested the four science instruments on the spacecraft.

NASA contracts awarded: NASA recently awarded a contract with a potential total value of $78.97 million to Raytheon Technical Services of Houston to support activities at Johnson Space Center's Neutral Buoyancy Laboratory and Space Vehicle Mockup Facility. The two-year base period for the contract is valued at $32.9 million with three one-year options valued at a total of $46.07 million. The facilities' operations contract will support the Extravehicular Activities (spacewalk) Office by operating, maintaining and providing engineering expertise for these facilities. The Neutral Buoyancy Laboratory supports astronaut training for spacewalks using underwater mockups and pressurized suits to simulate the near-weightless environment of space.

NASA college scholarship applications due March 28: Six scholarships for the 2003-2004 school year in the total amount of $8,000 each covering up to six calendar years will be awarded this year, agency-wide, to qualified dependents of NASA and former NASA employees by the NASA College Scholarship Fund Inc. Applicants must be pursuing an undergraduate degree in science or engineering. Applications must be postmarked by March 28, and are available online at *www.feea.org.*

Station crew marking extended stay in space

Expedition Six Commander Ken Bowersox, Flight Engineer Nikolai Budarin and NASA International Space Station Science Officer Don Pettit wrapped up another busy week aboard the International Space Station (ISS) and marked their 90th day in space Friday, Feb. 21.

NASA Administrator Sean O'Keefe said, during his monthly NASA Update held at Stennis Space Center on Feb. 20, that supplies will support the crew's stay on the ISS until June. O'Keefe said while there is no limitation at present to the station's water resources, resupply of water is a primary concern.

Expedition Six crewmembers began the week with the routine task of taking water samples, and Budarin began the process of disinfecting equipment in the Russian water supply system. Other routine activities included the monthly maintenance on the station's treadmill. Also, Pettit successfully replaced a faulty power switch in the Destiny Laboratory Module. Bowersox and Pettit took inventory of equipment located in the orbital outpost's Quest Airlock.

Next week, Bowersox and Pettit will test techniques for donning spacesuits when only two crewmembers are present.

The Expedition Six crewmembers, wearing Russian Sokol suits, pose for a crew photo in the functional cargo block on the International Space Station. Pictured, from left, are cosmonaut Nikolai Budarin, flight engineer; astronaut Donald Pettit, NASA's ISS science officer; and astronaut Kenneth Bowersox, mission commander. Budarin represents Rosaviakosmos.

NASA Update

Administrator Sean O'Keefe spoke to NASA employees at all 10 field centers via satellite feed from Stennis Space Center on Feb. 20. The visit to Stennis was O'Keefe's first since the Columbia accident. O'Keefe told employees that the independent Columbia investigation team is working to determine the cause of the disaster, fix it and return to flight. He also held a press conference from Stennis, where he told reporters representing media outlets across the country, 'We will not fly again until we can find what the correction is that we believe addresses either the cause or probable cause of the accident, and will then, in turn, give us an opportunity to fly safely as soon as we can practically do so.'

NASA's FY '04 budget proposed

On Feb. 3, NASA rolled out the first budget package proposed by Administrator Sean O'Keefe.

"With this FY '04 budget, NASA is embarking on a new, exciting and historic direction," said O'Keefe during the budget's rollout. "We are focusing on several major efforts. We will accelerate our work on in-space power generation and nuclear propulsion capabilities to enable any destination to be achievable. We will meet our International Space Station obligations and support our international partners by designing and deploying the Orbital Space Plane, while upgrading the capabilities of the Space Shuttle," he said.

The President's FY '04 budget request represents NASA's alignment with the agency's strategic plan. NASA's budget strategy is designed to improve the tools outlined in the President's Management Agenda and to make the agency's programs more responsible, credible and compelling.

"For Stennis Space Center, the proposed budget supports the Space Shuttle program's main engine testing requirements," explained Stennis Director Bill Parsons. "Additionally, the request will provide for the testing of key rocket components in support of the Next Generation Launch Technology Program and provide testing associated with the Integrated Powerhead Demonstrator, a joint NASA/Department of Defense project."

Parsons said funding will also be provided for the center's test infrastructure as well as infrastructure upgrades and maintenance in support of NASA and the resident agencies that comprise Stennis' unique federal and commercial city concept.

"In the area of Earth Science

See **BUDGET,** Page 5

Stennis family honors crew of Columbia with service

Distinguished military and community guests joined Stennis Space Center employees for a memorial service at 7:45 a.m., Thursday, Feb. 6, at the center. The memorial honored NASA astronauts Rick Husband, William McCool, Michael Anderson, Kalpana Chawla, David Brown and Laurel Clark and Israeli astronaut Ilan Ramon, who died Saturday, Feb. 1, aboard Space Shuttle Columbia as the shuttle was en route to landing at Kennedy Space Center, Fla. Participants included NASA's Robert Lightfoot, far left, director of propulsion testing; security patrolmen Don Kuylen and Josh Jordan, with flag; Stennis Space Center Director Bill Parsons; and Deputy Director Michael Rudolphi, far right. The Columbia flag was retired and presented to Parsons.

Flowers mark an impromptu memorial at the Launch Pad.

The Stennis family honors the Columbia crew.

Chaplain Michael Gilbert, Keesler Air Force Base, Biloxi, plays 'Amazing Grace.'

Representatives from NAVSCIATTS Class 1-03 present a letter of condolence to Stennis Deputy Director Michael Rudolphi on behalf of their fellow students.

Stennis employees sign a memorial book to be sent to the families of STS-107 crewmembers.

Stennis plans to go live with activation of IFMP

The Stennis Integrated Financial Management Program (IFMP) team has been working hard to make sure all financial information is correct and in the right format before testing sample transactions.

"Converting data from old to new formats and checking it for accuracy has been a mountainous task, but the team's thoroughness and attention to detail will pay off in the next phase of our installation," said Dr. Mike Thomas, program specialist. "The System Integrated Testing will be our primary focus until the middle of April, when we will have our initial user-acceptance tests."

Thomas said that Stennis is on time and on budget thanks to the outstanding effort of the IFMP team and the support being provided by all organizations across the center.

"Important events to watch for in the near future are processing freeze dates, cutover dates and user training," he said. "These dates are being finalized."

A new IFMP Web page is expected to be available this month and will include training schedules, important user-impact bulletins, schedules of events, process workflow information, frequently asked questions and other project-related information.

"In terms of system cutover, the Stennis community will have something very similar to an end-of-the-year experience in April or May rather than the usual August," Thomas said. "Basically, financial information will stop being put into the current systems around the end of April or the middle of May. Most of the month of May will be used to get everything into the new system, and we will go live in June. We can all expect some hiccups in the system until it stabilizes in July."

Specific dates for purchase request and purchase order cut-offs, bankcard purchases and travel voucher processing are being finalized now and will be briefed to program managers next month.

Thomas said Stennis is taking a three-step approach to training. The first step is a series of introductory classes for the people who will be regular users of the system. The next step will be to ask users to take specific Web-based courses; finally, a series of instructor-led, formal training classes will be given with the help

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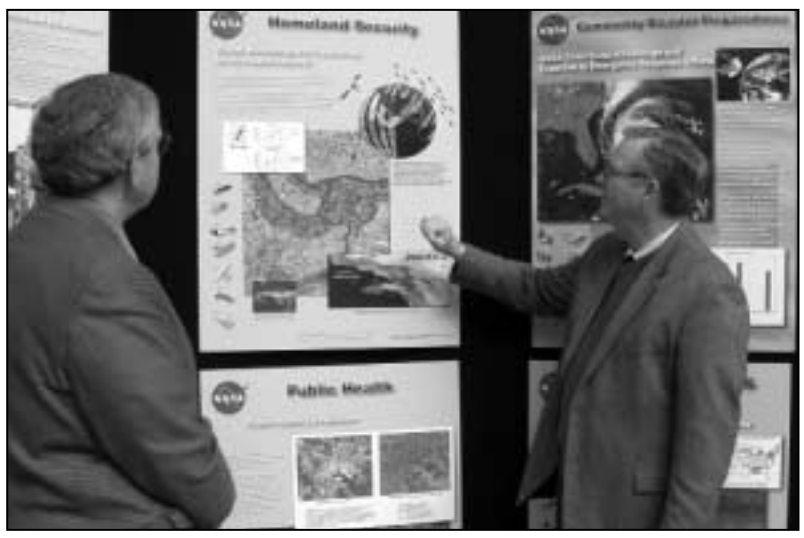

NASA's Roger King, left, chief technologist, Applications Division, Earth Science Enterprise, and Earth Science Applications (ESA) Director Dr. David Powe attended a recent exhibition at Stennis Space Center. ESA sponsored the exhibition, which showcased earth science research and technical capabilities among earth science affiliates at Stennis. Also participating in the exhibition were NASA's Propulsion Test Directorate, the Naval Research Laboratory, the University of Southern Mississippi and Mississippi State University.

Stennis engineer among four NASA personnel named technology leader

Dawn Davis
Engineer

NASA engineer Dawn Davis was honored as one of the 2003 Modern Day Technology Leaders in America at the 17th Annual Black Engineer of the Year Awards Conference, which took place Feb. 13-15 in Baltimore. She is one of only four NASA recipients of this recognition.

"To have been nominated and included as one of the Modern Day Technology Leaders is a tremendous honor to me," said Davis. "I am proud to be an engineer at NASA. The real value in this recognition is that it highlights the opportunities for young people in engineering and other technical fields."

The annual conference, hosted by U.S. Black Engineer & Information Technology Magazine, the Council of Engineering Deans of the Historically Black Colleges and Universities, and Lockheed Martin Corp., honored those in the African-American community who excel in the fields of math, science, engineering and information technology.

NASA's Gilbrech named manager of SSC Program Integration Office

Dr. Rick Gilbrech
Manager, Program Integration Office

Dr. Rick Gilbrech, former deputy director of the Propulsion Test Directorate, was named manager of the Stennis Program Integration Office on Jan. 26.

Stennis Space Center Director Bill Parsons said Gilbrech's assignment will meet the demands of the Source Evaluation Board for the Test Operations contract and sustain the leadership continuity of the Program Integration Office. "This activity is key to the future of Stennis Space Center," said Parsons. "I believe that Rick's assignment will provide the dedicated commitment needed to bring our endeavors to fruition successfully."

Gilbrech, an aerospace engineering graduate from Mississippi State University, received a doctorate in aeronautics from the California Institute of Technology. He joined NASA at Stennis Space Center in 1991. He has served as chief of the engineering division in propulsion test; a technical assistant to the Space Shuttle Program manager at Johnson Space Center, Houston; and chief of the Project Management Office.

BUDGET . . .

(Continued from Page 3)

Applications, funding remains consistent with plans to continue evaluating the use of earth science satellite data by other federal agencies and the verification and validation of data to ensure scientific accuracy," said Parsons. "The proposed budget also supports funding for NASA's earth science research and applications contributions in 12 national priority areas, such as agricultural competitiveness, coastal management, disaster preparedness, community growth and homeland security, areas in which Stennis plays a significant role."

STS-113 crew visit inspires students

NASA astronauts James Wetherbee, Michael Lopez-Alegria, Paul Lockhart and John Herrington (the first Native American astronaut who is a tribal member), visited Stennis Space Center on Jan. 22. The astronauts shared the experience of their recent STS-113 mission to the International Space Station with students from Mississippi and Louisiana.

The visit sparked enthusiasm among students and encouraged their interest in science and math.

"It's very inspiring to think that a Native American can go into space," said Kristi Willis, a senior at Choctaw Central High School in Philadelphia, Miss., and a member of the Mississippi Band of Choctaw Indians. "It makes me excited inside."

Counterclockwise from left: STS-113 astronauts sign autographs; Paul Lockhart operates a robot made by the For Inspiration and Recognition of Science and Technology (FIRST) robotics competition team from Pearl River, La.; STS-113 Commander James Wetherbee presents Stennis Space Center Director Bill Parsons with STS-113 memorabilia that flew aboard the mission.

Two historic firsts come together at StenniSphere

Two people who have made history by breaking new ground for Native Americans in science met at Stennis Space Center's award-winning visitor center, StenniSphere, on Jan. 22. NASA Astronaut John Herrington, the first Native American astronaut who is a tribal member, and the Mississippi Band of Choctaw Indians' 2002-2003 Princess Cheriena Brooke Ben, a member of the first Native American FIRST (For Inspiration and Recognition of Science and Technology) robotics competition team, met at Stennis when Herrington and the crew of STS-113 visited the center to share the experiences of their 14-day mission to the International Space Station (ISS) with employees, students, community leaders and invited guests.

On the STS-113 flight, Herrington, who is a member of the Chickasas tribe of Oklahoma, brought along a Choctaw medallion that he received in January 2001 when he visited the reservation in Philadelphia, Miss., for a ribbon-cutting ceremony to open an interactive classroom established by NASA at Choctaw Central High School. He plans to return to Philadelphia

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Choctaw Princess Cheriena Brooke Ben, left, learned about the STS-113 mission from fellow Native American and NASA astronaut John Herrington.

American Heart Month

As with engine and fuel pumps, prevention the best approach

February is "American Heart Month." The awareness campaign focuses on reducing risk factors related to heart disease.

The body's care can be compared with Space Shuttle Main Engine (SSME) testing. Like the SSME, the body functions best when it has the proper fuel, is tested regularly and is maintained according to plan.

SSME fuel quality is closely monitored. While in operation, any excess fuel not used is released overboard. But the body's extra fuel is stored in fat reserves, which can increase its "payloads," making it more difficult to move and increasing the stress on its "fuel pumps" and chassis.

SSME testing occurs on a scheduled basis. Monitoring basic biologic markers such as blood pressure, pulse and body weight is extremely beneficial in health maintenance.

Proper function of the SSME is dependent on the maintenance of structural integrity, computer systems, electrical systems, fuel supply, pressure maintenance and regular use. The body's "systems" also must be utilized regularly and monitored for maximum effectiveness and function. Regular activity maintains function and allows the body to perform daily tasks more easily.

Beginning in February, the Wellness Center is promoting "Be Active, Test Your Engines Regularly," an activity program for all Stennis employees. For information, contact the Wellness Center at *wellness.center@ssc.nasa.gov*.

Also, take advantage of the new Occupation Health Services Web site under the "Security, Safety and Health" link on the Stennis Intranet Portal.

NASA's Gobert named Citizen of the Year 2002 in Diamondhead

The Diamondhead Community Association named NASA's Ed Gobert its Citizen of the Year at its annual meeting Feb. 7.

Gobert, an architect, has worked for NASA for 25 years and has resided in Diamondhead for the past 22 years. He was recognized by the association for his many contributions to and volunteer support of the community and its functions. He serves on the association's architecture committee, consults on roads and grounds projects, and provides design work for playgrounds, swimming pools and recreation areas.

HISTORIC . . .

(Continued from Page 6)

to present the medallion to the students and Choctaw Chief Phillip Martin. "This is really our responsibility, to say, 'This is what space flight is like,' and to get young people excited and motivated to study math and science," said Herrington. "It's a chance to show them that they can do anything they dream about doing."

The long-standing relationship between NASA and the Mississippi Band of Choctaw Indians supports NASA's mission to inspire the next generation of explorers and has enriched the lives of students.

Contributions recognized

Center of Higher Learning's Jeanie Maxwell, left, presents InDyne Inc.'s Maria Lott, Astro Camp director, with a plaque and flag flown on STS-108 in December 2001, in recognition of Lott's work with NASA's Astro Camp and Astro Camp Saturday. Lott has directed the camp since 1997.

Tupelo students

Students from Tupelo Middle School participating in the school's Marine Educational Research with Mammals and Aerospace Investigation for the Development of Students (MERMAIDS) program recently traveled to Stennis Space Center. From left, Jasmine Catledge and Tabitha Sheffield learn how rocket engines are tested at an exhibit in StenniSphere. The MERMAIDS program encourages female students to seek careers in math and science and is funded in part by a grant from NASA.

Moon man

Keith Brock, left, deputy manager, Program Integration Office at Stennis, shows off his shuttle tie to the amusement of former Apollo astronaut John Young, center, and Stennis Space Center Director Bill Parsons, right, while the three waited to witness the first test of the flow liner simulator Jan. 22. Young made his first spaceflight in 1965 aboard Gemini 3. In 1972, he landed on the moon and walked on its surface during the Apollo 16 mission. In 1981, he was aboard the first flight of the Space Shuttle.

Community Involvement

Taking part in one of the Coast community's most popular activities — Mardi Gras — are, from left, Stennis Space Center Director Bill Parsons, his wife, Amy Parsons; Diamondhead's Krewe of Selene King David Theobald and Queen Linda Theobald, Stennis Public Affairs Officer; and Jeanie Maxwell and her husband, Robby Maxwell. The Theobalds ruled Selena at the ball Jan. 25.

IFMP . . .

(Continued from Page 5)

of people at sister centers.

"It will be critical that the people who interact with the new system attend this training," Thomas said. "Based on the experience at the other centers, the learning curve is substantial, and it will be important for us to learn as much as we can and practice the new processes before we go live."

SAFETY CORNER

Dealing with loss of shuttle will require processing

Everyone will deal with the loss of Columbia and its crew in his or her own unique way.

Even though people experience grief differently, there are so many general stages that most people go through, including shock or numbness, the struggle associated with transition and change — anger, fear, guilt, depression — and finally, adaptation or acceptance. These feelings are normal, and for most people, should subside in a few days or weeks.

It is very important to be mindful of vulnerability to accidents and unsafe practices when experiencing grief, loss or other intense emotions. People sometimes simply aren't able to focus on daily tasks.

It is equally important to care for emotional and physical needs during stressful times. Taking time out and practicing deep breathing, or "processing" thoughts with someone can help a great deal.

The Stennis Employee Assistance Program (EAP) is available to Stennis employees and their immediate family members to confidentially address concerns of a personal nature.

For appointments, contact Tim Donohoe, Stennis Space Center EAP coordinator, at ext. 8-3005 or e-mail *timothy.donohoe@ ssc.nasa.gov*.

For after-hours concerns or emergencies, call 1-888-807-7997.

QUICKLOOK

■ **Stennis hosts annual Area III Special Olympics.** John C. Stennis Space Center Area III Track and Field competitions, coordinated this year by the Naval Oceanographic Office, are scheduled to take place at Stennis on March 29. Special Olympics is an international organization dedicated to empowering individuals with mental retardation to become physically fit, productive and respected members of society through sports training and competition. For more information about this year's Area III event, contact Melanie Gehman at ext. 8-4938.

■ **Center Operations Directorate launches the Stennis Space Center Facility Manager Program Web page** at *http://www6.ssc.nasa.gov/fm/cent_ops.html*. This program is intended to enhance and improve the quality of life for employees at Stennis Space Center. The Facility Manager Program establishes for each Stennis building a single point of contact responsible for ensuring the general health and safety, the integration of emergency preparedness and response and the orderly operating environment of the building. The Web page will be updated regularly as the directorate continues to identify requirements and will incorporate new tools and reporting processes to enhance all aspects of the center's overall facility management activities. For additional information, contact Jim Barnett at ext. 8-3323.

■ **The Annual Stennis Space Center Special Olympics fund-raiser**, featuring Montana's Barbecue, will be held March 12 from noon until 1 p.m., at the Cypress House Pavilion. Tickets are $5 each. Prepaid ticket holders will be served beginning at 11 a.m. For information, contact Al Watkins at ext. 8-1447.

Wilbur and Orville Wright made their historic first flight Dec. 17, 1903. In support of NASA Quest's Centennial of Flight Project, the Lagniappe offers trivia questions each issue during the year-long celebration.

Q. At what NASA facility was the National Advisory Committee for Aeronautics (NACA) housed, and who was the director of research there at that time?

A. NACA was housed in the small Langley Laboratory, with only 100 employees by 1925, and conducted pure research, mostly related to aerodynamics, receiving advice and support from the headquarters director of research, Dr. George W. Lewis.

LAGNIAPPE

John C. Stennis Space Center, National Aeronautics and Space Administration publishes Lagniappe monthly through the Office of External Affairs, Public Affairs Office

Managing Editor . . . .Paul Foerman
Editor . . . . . .B.R. Hawkins

Comments or suggestions should be forwarded to the Lagniappe Office, Bldg. 1200, Rm 208D, Stennis Space Center, MS 39529, or call (228) 688-3585.

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